

DOCKET NO.: 249564US2/les



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

GROUP: 2871

Shingo NAGANO, et al.

SERIAL NO: 10/790,821

EXAMINER: Nguyen, T.N.P.

FILED: March 3, 2004

FOR: LIQUID CRYSTAL DISPLAY DEVICE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

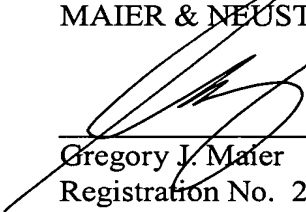
This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s). No more than five (5) pages are provided.

I am the attorney or agent of record.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 07/05)

Andrew T. Harry
Registration No. 56,959

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
SHINGO NAGANO, ET AL. : EXAMINER: NGUYEN, T. N. P.
SERIAL NO: 10/790,821 :
FILED: MARCH 3, 2004 : GROUP ART UNIT: 2871
FOR: LIQUID CRYSTAL DISPLAY :
DEVICE :

REMARKS ACCOMPANYING PRE-APPEAL BRIEF REQUEST FOR REVIEW

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicants respectfully request that a Pre-Appeal Brief Conference be initiated in accordance with the pilot program outlined in the Official Gazette Notice of July 12, 2005.

Claims 1-7 are pending in the application.

In the outstanding Official Action, Claims 1-2 and 5-6 were rejected under 35 U.S.C. § 103(a) as unpatentable over Komatsu (U.S. Pub. No. 2001/002146) in view of Fukunishi (U.S. Pub. No. 2001/0052889).

It is respectfully submitted that the applied references fail to make a *prima facie* case of obviousness, because neither Komatsu nor Fukunishi, alone or in combination, teach or suggest all the claim limitations.

Independent Claim 1 relates to a liquid crystal display device having a capacitor terminal placed opposite to a capacitor electrode and which is connected to a pixel electrode. *A drain electrode is electrically connected to the capacitor terminal through the pixel electrode and the pixel electrode includes at least two voltage supply paths to the capacitor*

terminal. In other words, the drain electrode is connected to the capacitor terminal via two or more voltage supply paths of the pixel electrode. The claimed liquid crystal display device is capable of supplying a voltage to a capacitor terminal to generate the necessary capacitance even in the case when a pixel electrode connection is disconnected.

In a non-limiting example, Fig. 1 of the present specification shows a pixel electrode (4) having two leads, which is connected to a capacitor terminal (12) at each of a plurality of connection holes (6), and the drain electrode (11) is connected to the capacitor terminal (12) through the two pixel electrode leads (4).

The Official Action of October 18, 2005, admits that Komatsu, the primary reference “lacks disclosure of...a drain electrode electrically connected to the capacitor terminal through the pixel electrode; and the pixel electrode comprises at least two voltage supply paths to the capacitor terminal.”¹ In an attempt to cure the deficiencies of Komatsu, the Official Action cited Fukunishi.

Amended, Claim 1 recites, *inter alia*, a liquid crystal display device comprising:

...a drain electrode electrically connected to the capacitor terminal through the pixel electrode...

In addressing this claimed feature, the Advisory Action of February 9, 2006, states that Fukunishi “discloses the drain electrode (5) electrically connected to the two terminal capacitors (5a) and (5b) directly and through the pixel electrode (7)”, citing Fig. 2. However, as depicted in Fig. 2, the drain electrode (5) is directly connected to each of the connection electrodes (5a/5b), which are then connected to the pixel electrode (7). In contrast, independent Claim 1 clearly recites that the ***drain electrode is electrically connected to the capacitor terminal through the pixel electrode.*** Fig. 2 of Fukunishi illustrates that the drain electrode (5), and the connection electrodes (5a/5b) are formed on the same layer of material, which is connected to the pixel electrode (7) at the connection electrode (5a/5b) portions.

¹ Official Action of October 18, 2005, p. 3.

Thus, the drain electrode (5) of Fukunishi is not connected to the connection electrodes (5a/5b) **through** the pixel electrode (7), as recited in independent Claim 1.

In other words, in Fukunishi's configuration, the connection electrodes (5a/5b) are connected to both the drain electrode (5) and the pixel electrode (7), but the connection electrodes (5a/5b) are located between the drain electrode (5) and the pixel electrode (7) and the drain electrode is not connected to the capacitor terminal **through the pixel electrode**, as recited in amended Claim 1.

Further, Claim 1 recites, *inter alia*, a liquid crystal display device wherein:

...the pixel electrode ***comprises at least two voltage supply paths to the capacitor terminal.***

As discussed above, Fig. 2 of Fukunishi describes that the pixel electrode (7) makes a single contact with each of the connection electrodes (5a/5b). However, the pixel electrode (7) does not include ***at least two voltage supply paths to the capacitor terminal***, as recited in Claim 1. Instead, the pixel electrode of Fukunishi includes a plurality of connections ***each to one of two different capacitor terminals***, one being connection electrode (5a), the other to connection electrode (5b).

Further, assuming *arguendo* that the outstanding rejection is improperly interpreting the connection electrodes (5a/5b) as separate for the purposes of suggesting that the drain electrode (5) is connected to the connection electrode (5a) "through" connection electrode (5b) and pixel electrode (7), it is clear under this interpretation that the pixel electrode of Fukunishi does not include ***at least two voltage supply paths to*** connection electrode (5a). Specifically, as depicted at Fig. 2, the connection electrode (5a) is connected to the pixel electrode (7) only via a single voltage supply path. Thus, should the above noted interpretation be used to support the rejection of the above noted feature that the "drain electrode [is] electrically connected to the capacitor terminal through the pixel electrode" it is

clear that Fukunishi fails to teach or suggest that the pixel electrode *comprises at least two voltage supply paths to the capacitor terminal*, as recited in independent Claim 1.

Therefore, Applicants respectfully submit that Fukunishi fails to teach or suggest *a drain electrode electrically connected to the capacitor terminal through the pixel electrode*, and that the pixel electrode *comprises at least two voltage supply paths to the capacitor terminal*, as recited in independent Claim 1.

Accordingly, Applicants respectfully request that the rejection of independent Claim 1 (and the claims that depend therefrom) under 35 U.S.C. § 103 be withdrawn.

Based on the above noted deficiencies in the outstanding rejections, Applicants respectfully request that these rejections be withdrawn.

Respectfully submitted,

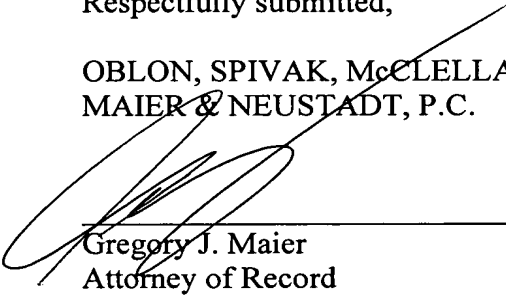
OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number

22850

Tel: (703) 413-3000

Fax: (703) 413 -2220
(OSMMN 08/03)



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Andrew T. Harry
Registration No. 56,959